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**Deutsche Sammlung von Mikroorganismen und Zellkulturen**  
**Abt. Menschliche und Tierische Zellkulturen**  
**German Collection of Microorganisms and Cell**  
**Cultures**

Inhoffenstr. 7b, D-38124 Braunschweig, Germany  
Tel. +49-531-2616.161, FAX +49-531-2616.150

E-Mail: [mutz@dsmz.de](mailto:mutz@dsmz.de)  
<http://www.dsmz.de>

**INFORMATION SHEET FOR CELL LINES**

Cell Line: **COLO-699**  
Cell Type: human lung adenocarcinoma  
DSMZ No: ACC 196  
Origin: established from the pleural fluid of a 57-year-old woman with adenocarcinoma of the lung in 1986  
References: not published  
Depositor: Dr. G. E. Moore, Colorado Oncology Foundation, Denver, Colorado, USA  
DSMZ Cell Culture Data:  
Morphology: adherent, epitheloid cells growing as monolayers  
Medium: 90% RPMI 1640 + 10% FBS  
Subculture: split confluent cultures every 2-3 days using trypsin/EDTA; seed out about  $1-2 \times 10^6$  cells/175 cm<sup>2</sup>  
Incubation: at 37 °C with 5% CO<sub>2</sub>  
Doubling Time: ca. 38 hours  
Harvest: cell harvest of about  $12 \times 10^6$  cells/175 cm<sup>2</sup>  
Storage: frozen with 70% medium, 20% FBS, 10% DMSO at about  $1 \times 10^6$  cells/ampoule  
DSMZ Scientific Data:  
Mycoplasma: negative in DAPI, microbiological culture, RNA hybridization assays  
Immunology: cytokeratin -, cytokeratin-8 -, cytokeratin-18 -, desmin -, endothel -, GFAP -, neurofilament -, vimentin +; cells are HMB-45 -positive (this marker is highly associated with melanomas - hence the cells may be melanoma-derived)  
Fingerprinting: multiplex PCR of minisatellite markers revealed a unique DNA profile  
Species: confirmed as human with IEF of AST, MDH  
Cytogenetics: human hypertriploid karyotype with 2% polyploidy - 70(62-72)<3n>XX, -X, +1, +3, -4, +6, +7, +7, +8, -9, -10, +12, -14, -16, -17, -17, +18, +20, der(2)t(2;10)(q27;q12), der(7)t(7;?)(p21;?)x2, i(10q), der(11)t(8;11)(q12;q14), idic(16q), der(21)t(21;?)(p12;?)x2 - a supernumerary small ring chromosome was present in 28% cells - corresponds to  
Viruses: ELISA: reverse transcriptase negative; PCR: EBV -, HBV -, HCV -, HHV-8 -, HIV -,

According to the DSMZ-Protocols of Identity-, Quality and Characterization Programs  
(see [http://www.dsmz.de/human\\_and\\_animal\\_cell\\_lines](http://www.dsmz.de/human_and_animal_cell_lines) Quality Control for details) .

**EXHIBIT E**

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**INFORMATION SHEET FOR CELL LINES**

Cell Line: CACO-2  
Cell Type: human colon adenocarcinoma  
DSMZ No: ACC 169  
Origin: established from the primary colon tumor (adenocarcinoma) of a 72-year-old Caucasian man in 1974  
References: Fogh et al., J. Natl. Cancer Inst. 58: 209-214 (1977); Rousset, Biochimie 68: 1035-1040 (1986); Bacher et al., Exp. Cell Res. 200: 97-104 (1992)  
Depositor: Prof. A. Bacher, Technical University of Munich, Munich, Germany  
DSMZ Cell Culture Data:  
Morphology: epithelial adherent cells; after splitting cells start to grow in colonies  
Medium: 80% MEM (with Earle's salts) + 20% FBS + 1x non-essential amino acids  
Subculture: cells grow slowly; split confluent culture 1:6 to 1:10 every 5-7 days using trypsin/EDTA or, if necessary, a cell scraper; after thawing cells might start slowly to take up growth; seed out at ca.  $1 \times 10^6$  cells/80 cm<sup>2</sup> in 10 ml medium  
Incubation: at 37 °C with 5% CO<sub>2</sub>  
Doubling Time: ca. 80 hours  
Harvest: about  $5-8 \times 10^6$  cells/80 cm<sup>2</sup>  
Storage: frozen with 70% medium, 20% FBS, 10% DMSO at about  $1-3 \times 10^6$  cells/ampoule  
DSMZ Scientific Data:  
Mycoplasma: contamination was eliminated with BM-Cyclin (tiamulin & minocycline), then negative in microbiological culture, RNA hybridization, PCR assay  
Immunology: cytokeratin +, cytokeratin-7 -, cytokeratin-8 +, cytokeratin-17 -, cytokeratin-18 +, desmin -, endothel -, GFAP -, neurofilament -, vimentin -  
Fingerprinting: unique DNA profile using multiplex PCR at D1S80, D2S44, D17S5 and ApoB  
Species: confirmed as human with IEF of MDH, NP  
Viruses: ELISA: reverse transcriptase negative; PCR: EBV -, HBV -, HCV -, HHV-8 -, HIV -,

According to the DSMZ-Protocols of Identity-, Quality and Characterization Programs  
(see [http://www.dsmz.de/human\\_and\\_animal\\_cell\\_lines](http://www.dsmz.de/human_and_animal_cell_lines) Quality Control for details) .

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**INFORMATION SHEET FOR CELL LINES**

Cell Line: 23132/87  
Cell Type: human gastric adenocarcinoma  
DSMZ No: ACC 201  
Origin: established from the primary tumor of a 72-year-old man with gastric adenocarcinoma in 1987  
References: Vollmers et al., Virchows Archiv B Cell Pathol. 63: 335-343 (1993)  
Depositor: Dr. H. P. Vollmers, Institute for Pathology, Würzburg, Germany  
DSMZ Cell Culture Data:  
Morphology: adherent epithelial cells growing as confluent monolayers  
Medium: 90% RPMI 1640 + 10% FBS  
Subculture: split confluent culture 1:8 every 5-6 days using trypsin/EDTA; seed out with 1-2 x 10<sup>6</sup>/25 cm<sup>2</sup> flask; initially after thawing, cells may grow slowly and loosely adherent  
Incubation: at 37 °C with 5% CO<sub>2</sub>  
Doubling Time: about 50 hours  
Harvest: cell harvest of about 0.3 x 10<sup>6</sup> cells/cm<sup>2</sup>  
Storage: frozen with 70% medium, 20% FBS, 10% DMSO at about 1-3 x 10<sup>6</sup> cells/ampoule  
DSMZ Scientific Data:  
Mycoplasma: contamination was eliminated with Ciprobay (ciprofloxacin), then negative in DAPI, microbiological culture, RNA hybridization assays  
Immunology: cytokeratin +, cytokeratin-7 +, cytokeratin-8 +, cytokeratin-17 +, cytokeratin-18 +, desmin -, endothel -, GFAP -, neurofilament -, vimentin -; (initial data published by the originators showed negativity, we found the cells to express cytokeratin-7)  
Fingerprinting: multiplex PCR of minisatellite markers revealed a unique DNA profile  
Species: confirmed as human with IEF of AST, MDH  
Cytogenetics: human hypertetraploid karyotype with 12% polyploidy - 47(45-52)<2n>XY, +20, t(1;15)(p11;p11), t(6;12) (p21;q21), i(13q), t(13;14)(p10;q10) - closely resembles  
Viruses: ELISA: reverse transcriptase negative; PCR: EBV -, HBV -, HCV -, HHV-8 -, HIV -.

According to the DSMZ-Protocols of Identity-, Quality and Characterization Programs  
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**INFORMATION SHEET FOR CELL LINES**

Cell Line: **DU-145**  
Cell Type: human prostate carcinoma  
DSMZ No: ACC 261  
Origin: established from the tumor tissue removed from the metastatic central nervous system lesion of a 69-year-old man with prostate carcinoma in 1975  
References: Mickey et al., in "Models for Prostate Cancer" (ed. G.P. Murphy), Alan R. Liss, 1980, p. 67-84  
Depositor: obtained from DKFZ Tumorbank, Heidelberg, Germany  
DSMZ Cell Culture Data:  
Morphology: epithelial-like adherent cells growing as monolayers  
Medium: 90% RPMI 1640 + 10% FBS  
Subculture: split confluent culture 1:3 to 1:5 every 2-3 days using trypsin/EDTA; seed out at ca. 2-3 x 10<sup>6</sup> cells/80 cm<sup>2</sup>  
Incubation: at 37 °C with 5% CO<sub>2</sub>  
Doubling Time: about 30-40 hours  
Harvest: cell harvest of about 35 x 10<sup>6</sup> cells/175 cm<sup>2</sup>  
Storage: frozen with 70% medium, 20% FBS, 10% DMSO at about 1-2 x 10<sup>6</sup> cells/ampoule  
DSMZ Scientific Data:  
Mycoplasma: negative in DAPI, microbiological culture, RNA hybridization, PCR assays  
Immunology: cytokeratin +, cytokeratin-7 +, cytokeratin-8 +, cytokeratin-17 -, cytokeratin-18 +, desmin -, endothel -, GFAP -, HMB-45 -, neurofilament -, vimentin +  
Fingerprinting: multiplex PCR of minisatellite markers revealed a unique DNA profile  
Species: confirmed as human with IEF of AST, MDH, NP  
Cytogenetics: human hypotriploid karyotype with 12% polyploidy - 62(58-65)<3n>X, -X/Y, -X/Y, -2, -3, +5, -8, -10, -13, +15, +15, -16, -18, -19, -20, -21, -22, +3mar, del(1)(p31), del(2)(p11), i(5p), del(6)(q22), del(9)(p12), del(11)(q23), der(12)t(11;12)(q11;p11), add(13)(q33), add(13)(q33), add(15)(p11)x2, add(16)(q24) - closely resembles reported  
Viruses: ELISA: reverse transcriptase negative; PCR: EBV -, HBV -, HCV -, HHV-8 -, HIV -,

According to the DSMZ-Protocols of Identity-, Quality and Characterization Programs  
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**INFORMATION SHEET FOR CELL LINES**

Cell Line: **BM-1604**  
Cell Type: human prostate carcinoma (derivative of DU-145)  
DSMZ No: ACC 298  
Origin: cytogenetic analysis and DNA fingerprinting at the DSMZ documented that this cell line is identical with the human prostate carcinoma-derived cell line DU-145 (DSM ACC 261), but shows some phenotypical differences; DU-145 was established from the tumor tissue removed from the metastatic central nervous system lesion of a 69-year-old man with  
References: Van Helden et al., Brit. J. Cancer 70: 195-198 (1994)  
Depositor: Dr. E. M. Bey, Highveld Biological Ltd., National Repository for Biological Materials, Sandringham, Kelvin, South Africa  
DSMZ Cell Culture Data:  
Morphology: epithelial-like cells growing as monolayers  
Medium: 85% RPMI 1640 + 15% FBS  
Subculture: split confluent culture using trypsin/EDTA; seed out at ca.  $2-3 \times 10^6$  cells/175 cm<sup>2</sup>  
Incubation: at 37 °C with 5% CO<sub>2</sub>  
Doubling Time: doubling time highly variable, about 60 hours  
Harvest: cell harvest of about  $10 \times 10^6$  cells/175 cm<sup>2</sup>  
Storage: frozen with 70% medium, 20% FBS, 10% DMSO at about  $3 \times 10^6$  cells/ampoule  
DSMZ Scientific Data:  
Mycoplasma: contamination was eliminated with Mycoplasma Removal Agent, then negative in DAPI, microbiological culture, RNA hybridization, PCR assays  
Immunology: cytokeratin +, cytokeratin-7 +, cytokeratin-8 +, cytokeratin-17 -, cytokeratin-18 +, desmin -, endothel -, GFAP -, neurofilament -, vimentin +  
Fingerprinting: same DNA profile as DU-145 using multiplex PCR of minisatellite markers  
Species: confirmed as human with IEF of AST, MDH  
Cytogenetics: human hypotriploid karyotype with 22% polyploidy - 59(55-63)<3n>X, -X/Y, -Y, -2, -3, -4, -7, -8, -14, -16, -19, -20, -21, -22, +5mar (inc bisat x2-3), del(1)(p31), del(2)(p12), i(5p), del(6)(q22)/add(6)(q?12), der(6)t(4;6)(q22;p22.3), del(9)(p21), add(10)(q24-q25), add(11)(p11), t(11;?22)(q24;q13)/del(11)(q23), der(12)t(5;12)(q13;p12.3), add(13)(q33)x2, add(13)(q33), add(15)(p11), der(18)t(14;18)(q11;q12.3)x1-2 - sideline with del(2)(p23), i(8q) - closely related to DU-145  
Viruses: ELISA: reverse transcriptase negative; PCR: EBV -, HBV -, HCV -, HHV-8 -, HIV -

According to the DSMZ-Protocols of Identity-, Quality and Characterization Programs  
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**EXHIBIT E**

**DSMZ - DEUTSCHE SAMMLUNG VON MIKROORGANISMEN UND ZELLKULTUREN**  
**Bereich Menschliche und Tierische Zellkulturen**  
**Inhoffenstraße 7 B, 38124 Braunschweig, Germany**  
**Tel.: +49-531-2616-161; Fax: +49-531-2616-150;**  
**E-mail: [mutz@dsmz.de](mailto:mutz@dsmz.de) Website: <http://www.dsmz.de>**

## **MATERIAL TRANSFER AGREEMENT**

**between the DSMZ and the Recipient of Cell Line(s)  
And Order Form for Cell Lines or DNA**

The material(s) listed below will be made available subject to the following conditions:

1. The DSMZ provides cells and DNA as a service to the research community. These materials are for research purposes only and not for use in humans.
2. Unmodified material, including their progeny shall not be sold or used for commercial purposes without the written consent of the DSMZ on behalf of the original depositor.
3. The undersigned confirms (also on behalf of his institution) to be the end user of the material. The material shall not be distributed or passed on to third parties.
4. Appropriate reference shall be made in any ensuing publication(s), crediting to the work of the original investigator who established the cell line(s). No alteration may be made to its DSMZ title or acronym.
5. It is understood that neither the DSMZ nor the depositor of the cells accept any liability whatsoever in connection with the receipt, handling, storage or use of the cell line(s).
6. The undersigned accepts (also on behalf of his institution) the conditions of ordering, delivery and payment of the DSMZ.

Typed or printed name of recipient

Date

Signature

Company/University

Institute (Department, room etc.)

Complete address

Telephone/Fax

e-mail

VAT no. (for EU countries)

Your purchase order no.  
(if applicable)

Your customer no.  
(if known)

Quantity

Cell Line:

ACC No:

Quantity

Cell Line:

ACC No:

indicate:

DNA

growing cultures

frozen culture(s)

cell pellets (non viable)

**NO CELL LINE IS SENT UNLESS THE DSMZ HAS RECEIVED THIS SIGNED FORM**

***EXHIBIT E***